1   COMPUTERIZED METHOD AND SYSTEM FOR FORMULATING STOCK
2   PORTFOLIOS
3
4   Cross-reference to Related Application
5   The present application claims priority from U.S. provisional application number
6   60/261,558 filed January 12, 2001, which is incorporated herein by reference.
7
8   Field of the Invention
9   The invention relates to a method and means for establishing a stock portfolio
10 wherein all of the stocks are selected by a computer program according to
11 predetermined parameters and characteristics.
12
13 Background of the Invention
14 In recent years, there has been an exponential rise in equity or stock investments by
15 individual investors. Many approaches are available to the individual investor. The
16 individual investor may independently buy or sell stocks based upon publicly
17 available data and using the investor's own judgment. The selection of a stock
18 involves a subjective evaluation that is not always based on solid analysis. Another
19 approach is to invest in a mutual fund wherein all management functions are
20 delegated to a fund manager who decides what stocks to buy or sell without any
21 input from the individual investor. In a way, the investor is investing in the person
22 who manages the fund. A problem is that the fund manager may or may not be
23 successful, and the investor has no control over the manager's actions. Another
24 type of investment is found with exchange traded funds or index funds which
25 comprise groups of stocks that closely follow the index which they represent. These
26 may be good vehicles for an investor but are limited by the index they follow.
27 Separately managed accounts or customized managed accounts are presently in
28 favor with large accumulations of retirement accounts. With such types of accounts,
29 the investment advisor or broker recommends certain stocks for purchase and sale
30 consistent with the investor's needs. Typically they are fee based for a percentage
31 of the assets under management plus brokerage charges incurred. Because they
32 require a large investment of the broker's time, these accounts are restricted to
33 amounts over $500,000, but in some instances may decrease to $100,000 with
34 combined management.
35
36 Summary of the Invention
37 According to this invention, a stock portfolio is generated by means of a computer
38 program that employs all or some of a number of fundamental and technical
39 parameters. These parameters comprise (1) earnings growth rate past 3 years,

1 (2)earnings growth rate current year, (3) earnings growth rate estimated next year,
2 (4) earnings growth rate last quarter vs same quarter last year, (5) price earnings
3 ratio estimated next year (P/E), (6) price earnings growth ratio current year (PEG),
4 (7) price earnings growth ratio estimated (PEG), (8) sales growth rate past year, (9)
5 sales more or less than 5 year average, (10) price momentum, (11) capitalization,
6 (12) debt , (13) dividend, (14) computed Rating. The computed Rating (14) is
7 generated by calculating the sum of the parameters (1) through (13) wherein each of
8 the parameters are weighted according to the effect on the value of a stock.
9
10 To achieve the programmed calculation, a database is received from an external
11 source that provides parameters (1) through (13) on a daily basis. Each parameter is
12 assigned a weight that is consistently used for all stocks being examined. As a
13 result, a Rating is produced for each stock and the weighted values and assigned
14 parameters are stored in a second database together with the Rating for each stock.
15 Groups of stocks that satisfy minimal Ratings are then filtered from the database of
16 all of the externally received stocks. Preset parameters and limits then determine
17 which stocks should be purchased to create a Portfolio and which stocks need to be
18 sold from the Portfolio. Preferably, a Portfolio comprises a group of ten selected
19 stocks. When one stock from the Portfolio is sold, another stock that meets BUY
20 parameters is purchased to maintain a Portfolio of ten selected stocks. The
21 invention is not limited to a Portfolio of ten stocks but may include more or less than
22 ten stocks that meet the parameters established by this invention.
23
24 Detailed Description of the Drawings
25   The invention will be described in greater detail with reference to the drawing in
26 which:
27 FIG. 1 is a flow chart describing the process of generating a Rating for each of the
28 stocks received from an external data source;
29 FIG. 2 is a flow chart showing the general process for processing the stocks, in
30 accordance with this invention; and
31 FIG. 3 is a flow chart showing the process for generating a Portfolio with ten stocks
32 that meet the weighted parameters.
33
34 Detailed Description of the Invention
35 With reference to Fig. 1, a database is obtained from an external data source daily
36 via electronic transmission, preferably after the stock market closes each day. The
37 database includes a large number of stocks and fundamental and technical
38 parameters associated with each of the stocks. Typically, the database lists 9000
39 selected stocks together with the fundamental and technical parameters which may

1 be examined and processed. Each parameter in the database is weighted according
2 to its significance and effect on the price of a stock. Typically, expected earnings
3 growth is weighted heavily, while momentum is weighted at a lower value. The
4 weighting process is implemented by the computer program of this invention and
5 reflects the history of the effects of the parameters on stock prices and stock values.
6 The parameters of each stock are directed through the weighting program to
7 produce a Rating for each stock. This Rating is a compilation of values of all the
8 parameters, and all of the parameters and the Rating are stored in a second
9 database. The second database with Ratings for each stock is searched for any or
10 all of the parameters and the Rating of any stock.

12 Fig. 2 shows another flow chart in which stocks are selected according to the
13 parameters employed by the present invention. The database of stocks and their
14 parameters are searched by a database manager search program. The parameters
15 include (S1) earnings growth rate past 3 years; (S2) earnings growth rate current
16 year; (S3) earnings growth rate estimate next year; (S4) earnings growth last quarter
17 compared to same quarter 1 year ago; (S5) P/E, estimated; (S6) P/E Growth,
18 current; (S7) P/E Growth, estimated; (S8) sales growth past 12 months; (S9)
19 difference between sales growth rate from the previous 3 years to the last year;
20 (S10) price momentum; (S11) capitalization; (S12) debt; (S13) dividend; and (S14)
21 Rating.

23 Using the parameters (S1) through (S14), "BUY" parameters are set and limits of
24 the "BUY" parameters that cannot be exceeded are set by the program. Whenever
25 the preset parameters for a "BUY" are met, an indication or notice is provided to
26 BUY. This indication is transmitted and provided by screen or computer monitor or
27 by e-mail. In the "SELL" program, the limits are set for each parameter at either a
28 percentage or a specific value that must be exceeded before the "SELL" program
29 indicates a "SELL" alert. The set percentage is applied to the value at which a
30 particular stock was purchased. Whenever any of these percentage limit parameters
31 are met, an indication is given to sell the stock. Alternatively, a specific value may
32 be set for a purchased stock to initiate a "SELL" alert. The percentages or the
33 specific values are determined by the user or administrator. In effect, stocks that
34 reach the BUY parameters are bought and are held until a stock exceeds the set
35 percentage limit or specific value at which time the stock is sold.

37 With respect to Fig. 3 which is a flow chart of a portfolios operation, a plurality of
38 stocks are selected by the program to establish a Portfolio. Each Portfolio includes
39 stocks that meet any or all of the parameters that fit investment goals of the

1 individual investor, the broker or a fund manager. The program serves to sell stocks
2 when they reach preset limits as defined by the program. In a specific
3 implementation of the invention, a Portfolio of ten best stocks are selected from an
4 Autoportfolio established automatically by the program. The Portfolio of ten stocks
5 may be selected for aggressive growth, value growth or value and income. Each
6 Portfolio of ten stocks is followed on a daily basis by the program. When a stock of
7 the Portfolio falls out of the limits of the selected parameters, it is removed from the
8 Portfolio listing and replaced by another stock which meets the parameters of the
9 program. The broker or fund manager or individual inventor is thereby alerted to
10 sell and buy stocks to maintain an active Portfolio.
11
12 The amount to be invested is divided between one or more of the various types of
13 portfolios to allocate the risk for the inventor. Each Portfolio is always available
14 and visible at all times on the web site of the broker or investment advisor. The
15 broker or advisor can produce a Portfolio using all or some of the parameters
16 selected from those parameters delineated in the program.
17
18 In practice, each client is assigned a purchase and sale page that shows the amount
19 invested in each Portfolio and the value of the Portfolio. In addition, a transaction
20 page shows the details of the number of shares of each stock owned by the client
21 and the present value and date of purchase of sale. This page is obtainable by the
22 broker electronically or by a written report.
23
24 The searches may be customized by the broker, advisor or client to use only
25 selected ones of the parameters. In addition, Portfolios can be generated using a set
26 of parameters listed in a previous search. The starting date of the Portfolio is
27 entered and each transaction is shown for stocks that meet or have met the
28 parameters used for evaluation. When a stock falls out of the parameter
29 requirements, the date of such fallout and the gain or loss at the date is shown.
30 When a new stock falls within the parameters of the system, the date of entry is
31 shown. By use of this system, actual past transactions of selected stocks may be
32 observed to learn about past performance.
33
34 An example of the determination of weighting for each of the parameters and
35 calculation of the Rating for each stock follows:
36
37 CALCULATION OF RATING
38
39 Example

1 S1 = EARNINGS GROWTH RATE PAST 3 YEARS
2   Growth rate is divided by 4 -   if 20%   20% x 100/4=   5
3
4 S2 = EARNINGS GROWTH RATE CURRENT YEAR
5   Growth rate is divided by 4 -   if 20%   40% x 100/4=   10
6
7
8 S3 = EARNINGS GROWTH RATE ESTIMATE NEXT YEAR
9   Growth rate times 5   if 30% x 100 x 5   150
10
11 S4 = EARNINGS GROWTH LAST QUARTER VS SAME QTR 1 YR AGO
12   Growth rate is divided by 2 -   if 30%   30/2=   15
13
14 S5 = P/E - ESTIMATED - 40
15   If P/E ratio is neg no rating possible
16   Otherwise the P/E is subtracted from 40 and that number is used
17   For example if P/E is 15, 40 - 15 -25   25
18
19 S6 = P/E G - current - 1.5 (price/earnings growth)
20   (1.5 - the current P/E G)
21   If neg. - it is not used and no calculation is possible
22   e.g. if P/E G = 1   1.5 minus 1 = 5   .5
23
24 S7 = P/E G - ESTIMATED - 1.5
25   (1.5 - the current P/E G) *5
26   If PEG = 1   .5 x 5 = 2.5   2.5
27
28 S8 = SALES GROWTH PAST 12 MONTHS   e.g.   4
29   (sales growth percent *100) /2.5
30
31 S9 = SALES MORE OR LESS THAN 5 YR AVERAGE
32   (sales growth percent past 12 mo - 3 yr average *100 /2.5   e.g.   5
33
34 S10=PRICE MOMENTUM - 100
35   (price momentum - 100) /2
36   e.g. if 150 = 150 - 100 divided by 2 = 25   25
37
38 S11=CAPITALIZATION (BILLIONS)
39   1 billion = 1   1

S12=DEPT
        Minus 1 point for each 10% debt   (e.g. if 10% debt)   -10

S13=DIVIDEND
        Dividends * 1000   e.g. if 2% dividend = .02 x 1000   20

S14=RATING   ———
        SUM S1: S13   253

Thus the Rating for a particular stock that meets the above parameters is "253".

The application of the parameters to a particular stock, Textron, Inc. (TXT) is presented as an example below.

EXAMPLE OF ASSIGNED VALUES

Name	Textron, Inc.
Ticker Symbol	TXT
Date	28-Sep-2001
Current Price Per Share	32.80
Principal Business	Aerosp & electron/spec Consum/mach tool/outdr
Earnings Growth Rate Past 3 years	-24%
Earnings Growth Rate Current Year	104%
Earnings Growth Rate Estimated Next Year	15%
Earnings Growth Rate Last Qtr. Vs Same Qtr. Last Year	-30%
Price Earnings Ratio Current (P/E)	8.48
Price Earnings Ratio Estimated Next Year (P/E)	7.35

Price Earnings Growth Ratio Current Year (P/E G)	0.08	
Price Earnings Growth Ratio Estimated Next Year (P/E G)		0.48
Sales Growth Rate Current Year	4%	
Sales Growth Rate Past Year	8%	
Price Momentum	70.00	
Capitalization	4.63 billions	
Debt Percent	189%	
Dividend	4%	
Rating	150.98	

In an implementation of the invention, a generated Portfolio includes one share of each selected stock. The stocks are monitored daily by computer programs to alert the broker, advisor or investor whether a stock is to be retained, sold or a new stock is to be added to the Portfolio. Multiple units of each Portfolio are purchased in accordance with the total amount to be invested. Different categories of Portfolios may be purchased for each investor to achieve the best risk benefit balance.

It should be understood that all or only some of the parameters defined herein may be selected for generating a Portfolio. Also, the Rating parameter need not be included with other parameters selected by the user of the program. Furthermore, other parameters, such as cash flow, book value and profit margin may be used in conjunction with some or all of the parameters set forth herein.